DATE: 05/27/2001

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PATENT APPLICATION: US/09/847,208
                                                              TIME: 16:48:07
                     Input Set : A:\Pto.amc
                     Output Set: C:\CRF3\05272001\I847208.raw
      3 <110> APPLICANT: Saxon, Andrew
              Zhang, Ke
              Zhu, Daocheng
      5
      7 <120> TITLE OF INVENTION: FUSION MOLECULES AND TREATMENT OF
              IGE-MEDIATED ALLERGIC DISEASES
     10 <130> FILE REFERENCE: UC67.002A
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/847,208
C--> 12 <141> CURRENT FILING DATE: 2001-05-01
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     14 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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     18 <212> TYPE: DNA
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     24 acccctgagg tcacatgcgt ggtggtggac gtgagccacg aagaccctga ggtcaagttc 180
     25 aactggtacg tggacggcgt ggaggtgcat aatgttaaga caaagccgcg ggaggagcag 240
    26 tacaacagca cgtaccgtgt ggtcagcgtc ctcaccgtcc tgcaccagaa ctggatgaat 300
     27 ggaaaggagt acaagtgcaa ggtctccaac aaagccctcc cagcccccat cgagaaaacc 360
     28 atotocaaag ccaaagtgca gccccgagaa ccacaggtgt acaccctgcc cccatcccgg 420
     29 gatgagetga ccaagaacca ggtcageetg acetgeetgg tcaaaggett ctateccage 480
     30 gacatcgccg tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct 540
     31 cccgtgctgg actccgtcgg ctccttcttc ctctacagca agctcaccgt ggacaagagc 600
     32 aggtggcagc aggggaacgt etteteatge teegtgatge atgaggetet geacaaceae 660
     33 taccagcaga ggagcctctc cctgtctccg ggtaaa
     35 <210> SEQ ID NO: 2
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     37 <212> TYPE: PRT
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     45 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
                35
                                    40
     47 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
                                55
     49 Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
                            70
                                                75
     51 Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                        85
                                             90
     53 Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
                    100
                                        105
     55 Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
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RAW SEQUENCE LISTING



RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/847,208

DATE: 05/27/2001 TIME: 16:48:07

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Output Set: C:\CRF3\05272001\I847208.raw

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58	-	130	_	-			135					140				
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	145			*		150	•		•		155		-			160
61	Tyr	Val	Asp	Glv	Val	Glu	Val	His	Asn	Val	Lys	Thr	Lys	Pro	Arq	Glu
62	- 4			.4	165					170	•		-		175	
	Glu	Gln	Tvr	Asn		Thr	Tvr	Ara	Val		Ser	Val	Leu	Thr	Val	Leu
64			-1-	180			- 1 -	3	185					190		
	His	Gln	Asn		Met	Asn	Glv	Lvs		Tvr	Lvs	Cvs	Lvs		Ser	Asn
66			195				1	200		- 1 -	-1	- 4 -	205			-
	Lys	Ala		Pro	Ala	Pro	Ile		Lvs	Thr	Ile	Ser		Ala	Lvs	Val
68	_,_	210	200				215		-10			220	-1-		-1-	
	Gln		Δra	Gĺu	Pro	Gln		Tur	Thr	Len			Ser	Ara	Asp	Glu
	225	110	1119	OLU	110	230	• • • •	- y -		Lou	235		201	9		240
	Leu	Thr	Luc	Δsn	Gln		Ser	T.@11	Thr	Cvs		Val	T.vs	Glv	Phe	
72	Беа	1111	цуз	11511	245	Val		пса	1111	250	neu	• 44	1 170	O ± y	255	- 1 -
	Pro	Sor	Λen	Tla		Val	Glu	Trn	Glu		Δen	Glv	Gln	Pro		Δen
74	FLO	261	тэр	260	Ala	Val	Giu	ттр	265	Der	ASII	OLY	OIII	270	Oru	11011
	Asn	ጥ፣፣ም	Tuc		Thr	Dro	Dro	Wal		Asn	Sar	V=1	G1 v		Dho	Pha
76	ASII	TÄT	275	1111	TIIT	110	110	280	Бец	лэр	261	VAI	285	561	LIIC	LIIC
	Leu	m		Tvc	Tou	Thr	Wal		Luc	Sar	Δνα	Trn		Gln.	Glv	Δen
78	пеп	290	261	цуз	пец	1111	295	пэр	цуз	561	n. g	300	OIII	0111	OLY	11011
	Val		Sar	Cvc	Sor	Val		Uic	Glu	Δla	Lan		Δen	Hie	Tur	Gln
	305		Ser			310	1166	1113	OIU	AΙα	315	1113	ASH	1113	- y -	320
	Gln							Dro	Glv	Luc	313					320
82	GIII	ALY	Ser	пеп	325	пец	561	110	Ory	330						
	<210)	וד חי	NIO.						330						
	<211															
	<212				, _											
	<213				Homo	n gar	niana									
	<400					Jur	,									
	Glu					Δsn	I.vs	Thr	His	Thr	Cvs	Pro	Pro	Cvs	Pro	Δla
92	1	110	шyз	Jei	5 S	АЗР	цуз	1111	1113	10	Cys	110	110	Cys	15	7114
	Pro	Glu	Lan	Lau	-	Glv	Pro	Sar	Val		T.211	Pho	Pro	Pro		Pro
94	110	Giu	neu	20	Gry	GLY	110	Der	25	THE	шси	LIIC	110	30	цys	110
	Lys	7.00	Thr		Mot	Tla	Sar	Λκα		Dro	Glu	Val	Thr		V = 1	V = 1
96	пуз	тэр	35	пец	Mec	i.re	261	40	1111	110	Giu	vai	45	Cys	Val	Vai
	Val	7 00		Cor	иic	Clu	Λen		Glu	Wal	Twe	Dho		Trn	Тиг	V = 1
		_	vaı								БУЗ			тър	TYL	Vai
98							-							C1,,	C1,1	Cln
	-	GTĀ	vai	GIU	Val		ASII	Val	гу	IIII	ъуs 75	FIO	ALG	GIU	GIU	Gln 80
	0 65	. 7		. m.	. m	70	. 17.5.1	170		. 171		. mb.	. 170	l To	. uic	
	_	: ASI	ı sei	Thi		Arc	y val	L Va.	r sei		те с	1 1111	. va.	г те	95	Gln
102		m		70	85		. 01.	. m	- T	90	. T	. 17. 1	0	- 7\		. 7.1 _
		ı Tr	о мет			/ гуз	S GIL	тту			э гуз	val	. sei			s Ala
10			. 74.7	100			. т	. m.	105		. T	. הו	. т	110		. D
		ı Pro) TT€	e GIL	r rĀs			e sei	: гуз	, AT			r GTI	n.Pro
10			77,	-				101	`				101			
		- 01	115		. 17-1	. m	. m	120		. D		. 7	125		, T a-	ı Thr



RAW SEQUENCE LISTING DATE: 05/27/2001 PATENT APPLICATION: US/09/847,208 TIME: 16:48:07

Input Set : A:\Pto.amc

Output Set: C:\CRF3\05272001\I847208.raw

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                            135
109 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
                        150
                                            155
110 145
111 Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
                    165
                                        170
113 Lys Thr Thr Pro Pro Val Leu Asp Ser Val Gly Ser Phe Phe Leu Tyr
114
                180
                                    185
115 Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
            195
                                200
116
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                                                 220
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123 <210> SEQ ID NO: 4
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131 acctgggaca caggeteett caacgggaca actatgacet taccagecae caeceteacq 180
132 ctctctqqtc actatqccac catcaqcttq ctgaccqtct cgqgtgcgtg ggccaagcag 240
133 atgttcacct geogtgtggc acacacteca tegtecacag actgggtega caacaaaacc 300
134 ttcagcgtct gctccaggga cttcaccccg cccaccgtga agatcttaca gtcgtcctgc 360
135 gacqqcqqcq qqcacttccc cccqaccatc cagctcctqt gcctcgtctc tgqgtacacc 420
136 ccaqqqacta tcaacatcac ctqqctqqaq qacqqqcaqq tcatqqacqt qqacttqtcc 480
137 accgcctcta ccacgcagga gggtgagctg gcctccacac aaagcgagct caccctcagc 540
138 cagaagcact ggctgtcaga ccgcacctac acctgccagg tcacctatca aggtcacacc 600
139 tttgaggaca gcaccaagaa gtgtgcagat tccaacccga gaggggtgag cgcctaccta 660
140 ageeggeeca geeegttega eetgtteate egeaagtege eeaegateae etgtetggtg 720
141 gtggacctgg cacccagcaa ggggaccgtg aacctgacct ggtcccgggc cagtgggaag 780
142 cctqtqaacc actccaccag aaaggaggag aagcagcgca atggcacgtt aaccgtcacg 840
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144 acceaecce acctgeecag ggeecteatg eggteeacga ceaagaccag eggeeegegt 960
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149 gagttcatct gccgtgcagt ccatgaggca gcgagcccct cacagaccgt ccagcgagcg 1260
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153 agggc
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RAW SEQUENCE LISTING DATE: 05/27/2001 PATENT APPLICATION: US/09/847,208 TIME: 16:48:07

Input Set : A:\Pto.amc

Output Set: C:\CRF3\05272001\I847208.raw

1.60	-				_					10					1 -	
162		D	0	7	5 71-	m\	0	57-3	m1	10	C1	C	τ	7.1.	15	C1
	тте	Pro	Ser		Ата	Thr	Ser	Val		Leu	GIY	Cys	ьeu		Thr	GIÀ
164	_	-1	_	20	_				25	.		m)	01	30	.	
	Tyr	Phe		GLu	Pro	vaı	Met	Val	Thr	Trp	Asp	Inr		Ser	Leu	Asn
166			35		_,	_	_	40			_		45	_	~1	
	Gly		Thr	Met	Thr	Leu		Ala	Thr	Thr	Leu		Leu	Ser	GLY	His
168		50			_	_	55					60	_		_	
		Ala	Thr	He	Ser		Leu	Thr	Val	Ser		Ala	Trp	Ala	гàг	
170				_	_	70				_	75	_		_	_	80
	Met	Phe	Thr	Cys		Val	Ala	His	Thr		Ser	Ser	Thr	Asp		Val
172	_	_	_	_,	85	_		_	_	90	_	-,	m1	_	95	mi
	Asp	Asn	Lys		Phe	Ser	Val	Cys		Arg	Asp	Phe	Thr		Pro	Thr
174		_		100			_	_	105					110	_	_
	Val	Lys		Leu	GIn	Ser	Ser	Cys	Asp	GLy	GLy	GLy		Phe	Pro	Pro
176			115		· .				_		_ '		125	~ 1		
	Thr		Gln	Leu	Leu	Cys		Val		GLy	Tyr		Pro	GLY	Thr	lle
178		130					135					140		_		_
		Ile	Thr	Trp	Leu		Asp	Gly	Gln	Val		Asp	Val	Asp	Leu	
	145	_				150					155				_	160
	Thr	Ala	Ser	Thr		Gln	Glu	Gly	Glu		Ala	Ser	Thr	GIn		GIu
182					165					170		_		_	175	_
	Leu	Thr	Leu		Gln	Lys	His	Trp		Ser	Asp	Arg	Thr		Thr	Cys
184				180					185			_		190	_	_
	Gln	Val		Tyr	Gln	Gly	His	Thr	Phe	Glu	Asp	Ser		Lys	Lys	Cys
186			195				_	200					205			
187	Ala		Ser	Asn	Pro	Arg		Val	Ser	Ala	Tyr		Ser	Arg	Pro	Ser
188		210				_	215					220		_	_	
		Phe	Asp	Leu	Phe		Arg	Lys	Ser	Pro		Ile	Thr	Cys	Leu	
	225			_		230	_				235	_		_	_	240
	Val	Asp	Leu	Ala		Ser	Lys	Gly	Thr		Asn	Leu	Thr	Trp		Arg
192		_		_	245		_		_	250	_	_	~ 1		255	01
	Ala	Ser	GLy	_	Pro	Val	Asn	His		Thr	Arg	глs	GIu		гàг	Gin
194	_	_	~ 1	260	_	m 1		m)	265	m)	_	_		270	m)	
	Arg	Asn	_	Thr	Leu	Thr	Val	Thr	Ser	Thr	Leu	Pro		GLY	Thr	Arg
196	_	_	275	0 1	01	01	m1	280	61	~	7 0	** - 1	285	***	D	11.2 -
	Asp	_	тте	GIU	GIA	GIU		Tyr	GIN	Cys	Arg		Thr	HIS	Pro	HIS
198	_	290	_	* 1	-		295	•	m1	m)	-	300	•	C 1	D	20
		Pro	Arg	Ата	Leu		Arg	Ser	Tnr	Tnr		Thr	Ser	стА	Pro	
	305			~ 1		310	m 1	D)	n 1 .	m).	315	~ 1	m	D	01	320
	Ala	Ala	Pro	GIU		Tyr	Ата	Phe	Ата		Pro	GIU	Trp	Pro		Ser
202	_	_	_	_	325		7 . 7	~		330	6 3.	7	D1 -	1 /- L	335	C1
	Arg	Asp	ьуs	_	Thr	ьeu	Ата	Cys			GIN	ASI	Pne		Pro	GIU
204	_	~ 1	_	340	~ 3	m .	.		345	-	77 - 7	01	T	350	7	71 -
	Asp	тте		vaı	GIN	Trp	ьeu	His	ASI	GIU	vaı	GIII		Pro	Asp	Ата
206			355	m1	m1	Q1	D	360	T	m1	T	C1	365	C1	nh -	Dh a
	_		ser	Thr	Inr	GIN		Arg	гуѕ	Tnr	гуѕ		ser	GTÀ	rne	rne
208		370	C	7	T ~ · ·	C1	375	m	7)	ת ה ת	C1	380	C1	C1~	T	7.00
		rne	ser	Arg	Leu		٧d⊥	Thr	Arg	AId		ττħ	GIU	GTII	пλа	
ZIU	385					390					395					400



RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/847,208

DATE: 05/27/2001 TIME: 16:48:07

Input Set : A:\Pto.amc

Output Set: C:\CRF3\05272001\I847208.raw

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		<212> TYPE: PRT														
					***			_								
						Homo sapiens										
)> SI					_		_		_	_	_	_		~ -
	_	Thr	Pro	Pro	Thr	Val	Lys	He	Leu		Ser	Ser	Cys	Asp		Gly
224	1				5					10		_			15	
	Gly	His	Phe		Pro	Thr	Ile	Gln		Leu	Cys	Leu	Val		Gly	Tyr
226				20					25					30		
227	Thr	Pro	Gly	Thr	Ile	Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met
228			35					40					45			
229 230	Asp	Val 50	Asp	Leu	Ser	Thr	Ala 55	Ser	Thr	Thr	Gln	Glu 60	Gly	Glu	Leu	Ala
	Ser		Gln	Ser	Glu	Leu		Len	Ser	Gln	Lvs		Trp	Leu	Ser	Asp
232		1111	0411	001	OIG	70	****	200	001		75			L Cu	001	80
		Thr	Tur	Thr	Cys		Val	Thr	Tur	Gln		His	Thr	Phe	Glu	
234	mrg	1111	ı yı	1111	85	OIII	vai		- y -	90	O T y	*****		1110	95	nsp
	Sar	Thr	Tuc	Tuc	Cys	Λla	Aen	Sor	Acn		Ara	G1 v	Wal	Sor		Тиг
236	ser	TIII	цуз	100	Cys	Ата	лэр	per	105	110	ALG	Gry	Val	110	лта	1 Y L
	T 0.11	Com	71 ~~ ~~		Cor	Dwo	Dho	7 00		Dho	Tlo	7 ~~	Tuc		Dro	mb x
	ьeu	ser	_	Pro	Ser	PIO	Pne		ьeu	Pne	тте	Arg		ser	PIO	1111
238			115	-			_	120	7. 1	ъ.	C .	.	125	m1	T7 - 1	D
	TTe		Cys	Leu	Val	Val	_	ьeu	Ата	Pro	Ser		GTA	Thr	vaı	Asn
240	_	130	_	_	_		135	~ 1	-	_	** 7	140		~	m1	7
		Thr	Trp	Ser	Arg		Ser	GTA	Lys	Pro		Asn	HlS	Ser	Thr	
242				_	~	150	_		_,	_	155		m)			160
	Lys	Glu	Glu	Lys	Gln	Arg	Asn	GLy	Thr		Thr	Val	Thr	Ser		Leu
244	_				165	_	_			170		,	_		175	_
	Pro	Val	Gly		Arg	Asp	Trp	Ile		Gly	Glu	Thr	Tyr		Cys	Arg
246				180					185					190		
	Val	Thr	His	Pro	His	Leu	Pro		Ala	Leu	Met	Arg		Thr	Thr	Lys
248			195					200					205			
249	Thr	Ser	Gly	Pro	Arg	Ala	Ala	Pro	Glu	Val	Tyr	Ala	Phe	Ala	Thr	Pro .
250		210					215					220				
251	Glu	Trp	Pro	Gly	Ser	Arg	Asp	Lys	Arg	Thr	Leu	Ala	Cys	Leu	Ile	Gln
252	225					230					235					240
253	Asn	Phe	Met	Pro	Glu	Asp	Ile	Ser	Val	Gln	Trp	Leu	His	Asn	Glu	Val
254					245	_				250					255	
	Gln	Leu	Pro	Asp	Ala	Ara	His	Ser	Thr	Thr	Gln	Pro	Arq	Lys	Thr	Lys
256	02			260		5			265				,	270		-
	Glv	Ser	Glv		Phe	Val	Phe	Ser		Leu	Glu	Val	Thr		Ala	Glu
258	_	501	275					280	9		014		285	5		
		61		Lue	Asp	G111	Phe		Cve	Δrα	ΔΙο	Val		Glu	Δla	Ala
260	ıτþ	290	GIII	цÃЗ	nap	JIU	295	116	∪y3	1119	1114	300		JIU		
	C^~		C~~	@1 n	Thr	17 n 1		۵ra	7 .1 ∽	Va 1	Ser		Aen	Pro	Glv	T.vs
		LIO	Ser	GTII	TILL		GTII	AT 9	лта	vaı	315	val	11011	110	O ± y	320
202	305					310					213					J20



Please Note:

Use f n and/ r Xaa hav been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequenc which presents at least one n or Xaa.



PATENT APPLICATION: US/09/847,208

DATE: 05/27/2001 TIME: 16:48:08

Input Set : A:\Pto.amc

Output Set: C:\CRF3\05272001\1847208.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:3086 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
L:3129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84
L:3466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
L:3468 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
L:3483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94
L:4518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:126
L:6226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176
L:6228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176
L:6243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177
L:6245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177